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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/716,059 | 11/18/2003 | Lewis Timothy Lukich | DN2003186 | 4788 |

27280 7590 06/01/2006

THE GOODYEAR TIRE & RUBBER COMPANY
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| EXAMINER | |
|---|---|
| MAKI, STEVEN D | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1733 | |

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/716,059 | LUKICH ET AL. | |
| | Examiner | Art Unit | |
| | Steven D. Maki | 1733 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on 5-5-06.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1 and 5-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1 and 5-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5-5-06 has been entered.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of claims 5 and 6, there is no antecedent basis for "said blowing agent".

4) Applicant is advised that should claim 1 be found allowable, claim 12 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claims 1 and 12 have the same scope since the limitation in claim 12 is already found in claim 1.

5) Claim 8 is objected to because of the following informalities: "is comprised of is" should be --is comprised of--. Appropriate correction is required.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7) **Claims 1 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandstrom et al (US 2003/0089438) in view of Cole (WO 02/40581) and Egan (US 4,249,588) and optionally Japan 209 (JP 8-324209).**

Sandstrom et al discloses a pneumatic agricultural tire (farm tractor tire) having a tread, sidewalls, carcass and beads wherein the tread comprises lugs. The lugs have a height of 12.5 cm to 80 cm. The tread comprises a *shock dampening* rubber composition comprising (A) 70 to 100 parts at least one **isobutylene based rubber** selected from (1) butyl rubber as a copolymer of isobutylene and isoprene wherein the copolymer contains from about 2 to about 6 weight percent units derived from isoprene, (2) halobutyl rubber as a halogenated butyl rubber where the halogen is selected from bromine or chlorine, and (3) brominated copolymer of isobutylene and paramethylstyrene (paragraphs 12-17) and (B) zero to about 30 parts at least one **diene based elastomer** selected from polymers of isoprene and/or 1,3-butadiene and copolymers of styrene with isoprene and/or 1,3-butadiene. Sandstrom et al does not recite that the tread rubber has a closed cellular structure.

As to claims 1 and 5-12, it would have been obvious to one of ordinary skill in the art to include a blowing agent in Sandstrom et al's rubber composition such that the tread made therefrom, including the tread lugs, consists of a "closed cellular structured

rubber composition" since (1) Sandstrom et al teaches that the disclosed rubber composition provides the tread of a pneumatic agricultural tire with a shock dampening / shock absorbing effect, (2) Cole, directed to the problem of providing a pneumatic tire with a shock absorbing tread, suggests adding blowing agents to relatively hard solid rubber formulations to form an entire tire outer including its lugs such that it consists of a relatively hard closed cell sponge rubber having higher dampening characteristics (figure 4) and (3) Egan, directed to providing the tread of an off-road tire with closed cells so that the tire has a softer ride, teaches that the rubber (such as butyl rubber as found in Sandstrom et al) of the entire ground contacting tread portion 7 should contain closed cells so that desired ride qualities are obtained and optionally (4) Japan 209 suggests providing an agricultural tire having lugs with an outer layer comprising closed cells so as to prevent bringing of mud adhered to the tread to the dry road when the vehicle leaves the muddy fields.

With respect to NTG, it would have been obvious to one of ordinary skill in the art to provide Sandstrom et al's tread with a net to gross of 15-22% since (1) Sandstrom et al's tread is for a pneumatic agricultural tire and (2) it is taken as well known / conventional per se to provide the tread of a pneumatic agricultural tire with a net to gross of less than 35% or less than 25%.

With respect to cell content / cell size, the claimed closed cell content and closed cell size would have been obvious and could have been determined without undue experimentation in view of Cole's suggestion to add blowing agent so as to obtain desired damping characteristics.

Motivated by the desire found in Sandstrom et al to provide a tread having lugs for a pneumatic agricultural tire (off-road tire) with a substantial shock absorbing property / high dampening property, one of ordinary skill in the art would have found it obvious to use Cole's teaching to improve the shock absorbency / dampening characteristics of an off-road tire with tread lugs by blowing Sandstrom et al's entire tread rubber composition with Cole's blowing agent so as to produce a micro porous closed cellular rubber having good shock absorbing characteristics / higher dampening characteristics. One of ordinary skill in the art would have had a reasonable expectation of success for providing the tread of Sandstrom et al's agricultural tire (off-road tire) with closed cells since (1) Cole's invention is to convert a hard rubber having low shock-dampening characteristics for an off-road tire to a closed cell rubber having good shock absorption / higher dampening characteristics and (2) the optional Japan 209 evidences that closed cell rubber can be used in an off-road tire such as a pneumatic agricultural tire. With respect to the addition of "consists of", both Cole and Egan suggests using closed cell rubber for *at least the entire tread* of a pneumatic tire.

As to claim 5, Cole teaches using azodicarbonamide as a blowing agent.

As to claim 6, it would have been obvious to one of ordinary skill in the art to use the claimed blowing agent in Sandstrom et al's tread since (1) Cole suggests using a blowing agent in a rubber composition to produce the cellular structure and (2) a "composite of benzenesulfonyl hydrizide and paraffinic oil" is taken as a well known / conventional blowing agent per se for making a closed cell structure.

As to claim 7, Sandstrom et al teaches using a thin layer at paragraph 19.

As to claim 8, Sandstrom et al teaches that the rubber composition may comprise 0-30 parts of at least one diene rubber.

As to claims 9-11, Sandstrom teaches using an isobutylene based rubber. See paragraphs 13-16.

Remarks

8) The prior art rejection using Japan 209 as a primary reference has been withdrawn in view of the amendment to claim 1.

The obvious type double patenting rejection has been withdrawn since if the rejection based on US 2003/0089438 (Sandstrom et al) falls then the obvious type double patenting rejection will also fall.

Applicant's arguments with respect to claims 1 and 5-12 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 3-23-06 have been fully considered but they are not persuasive. With respect to the addition of "consists of", both Cole and Egan suggests using closed cell rubber for *at least the entire tread* of a pneumatic tire.

9) No claim is allowed.

10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
May 27, 2006

STEVEN D. MAKI
PRIMARY EXAMINER
5-27-06